

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

**(19) World Intellectual Property Organization
International Bureau**



(43) International Publication Date
1 July 2004 (01.07.2004)

(75) **Inventors/Applicants (for US only): CAPPELLOITTO, Guido** [IT/IT]; c/o Alpina Raggi S.p.A., Via C. Battisti, 60, I-20043 Arcore (IT). **FIORAVANTI, Moreno** [IT/IT]; c/o Alpina Raggi S.p.A., Via C. Battisti, 60, I-20043 Arcore (IT). **RIBEIRO, Joao, Miranda, Carlos** [-/-IT]; c/o Alpina Raggi S.p.A., Via C. Battisti, 60, I-20043 Arcore (IT). **KAWAI, Steve** [-/IT]; c/o Alpina Raggi S.p.A., Via C. Battisti, 60, I-20043 Arcore (IT).

(22) International Filing Date:

12 December 2003 (12.12.2003)

(25) Filing Language:

Italian

(26) Publication Languages:

English

(30) Priority Data:

BC2002A000783

13 December 2002 (13.12.2002) IT

PD2002A000334

24 December 2002 (24.12.2002) IT

03002313.9

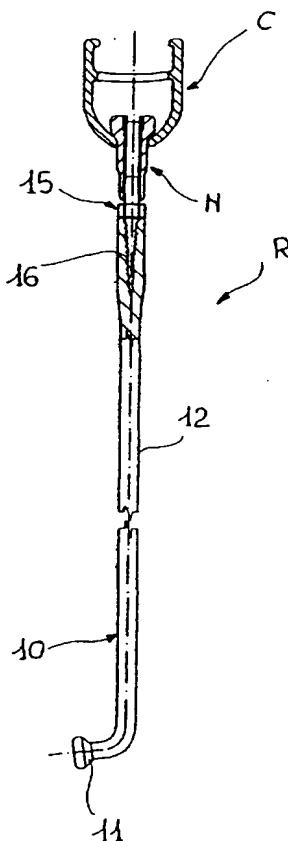
28 March 2003 (28.03.2003) EP

(74) Agents: CANTALUPPI, Stefano et al.; Cantaluppi & Partners S.r.l., Via Matteotti 26, I-35137 Padova (IT).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,

[Continued on next page]

(54) Title: A WHEEL SPOKE AND A METHOD FOR THE MANUFACTURE THEREOF



(57) Abstract: A spoke for wheels comprises a shaft on a longitudinal end of which a terminal element carrying a device for the attachment of the spoke to the respective component of the wheel is fitted by means of fixing means. The fixing means comprise a stud-bolt-type connection. A method for the manufacture of the spoke is also described.



LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SI, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

- (84) **Designated States (regional):** ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

- as to the identity of the inventor (Rule 4.17(i)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS,

LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SI, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

- of inventorship (Rule 4.17(iv)) for US only

Published:

- with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.